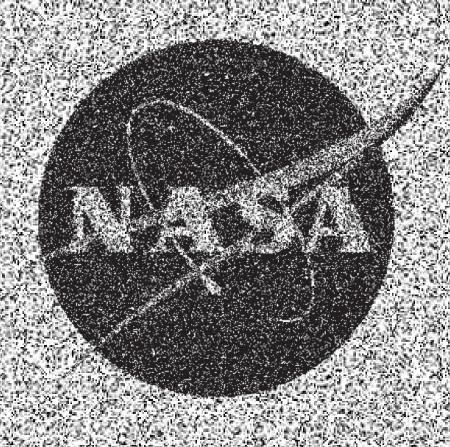
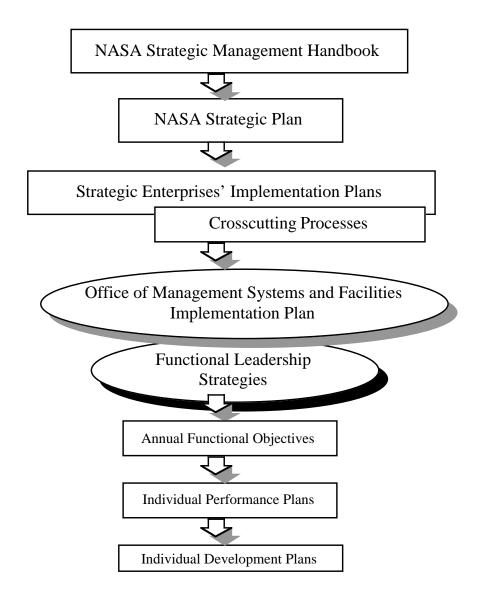
OFFICE OF MANAGEMENT SYSTEMS AND FACILITIES



FUNCTIONAL/STAFF OFFICE IMPLEMENTATION PLAN

Implementing NASA's Strategies for the 21st Century



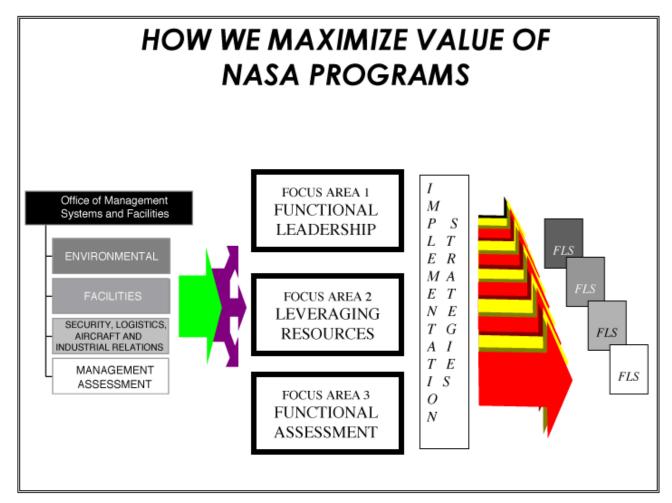
This diagram depicts how the Office of Management Systems and Facilities (OMS&F) Implementation Plan aligns, through the NASA Crosscutting Processes, with the NASA Strategic Plan. Our plan delineates the goals, metrics, and results we desire in support of NASA's mission, which will lead to more effective and efficient operations for the Agency.

Our Functional Leadership Strategies are a continuum of the NASA strategic processes. These Strategies further define each functional leadership role in the areas of Aircraft Management, Contractor Industrial Relations, Environmental Management, Facilities Engineering, Logistics Management, Management Assessment, and Security Management.

Each functional area has annual objectives, which describe in detail the courses of action that evaluate and determine alternative paths to achieve NASA's mission, goals, and associated metrics. Individual Performance Plans provide alignment among the overarching organizational goals, annual functional objectives, and personal courses of action. The Individual Development Plans provide integration among organizational goals, professional objectives, and individual development.

Introduction

This plan is the foundation from which the Office of Management Systems and Facilities implements NASA strategies for the 21st century. We have been aggressively implementing a major paradigm shift from the classic top-down direction and indepth oversight role to the new advisory and partnership model for functional leadership delineated in the NASA Strategic Management Handbook. This implementation involves multiple strategies to leverage scarce resources and represents the contract we have with our customers to provide high-quality functional and staff organization services. For effective implementation, the content of this plan has been coordinated with the Enterprises, the Centers, and other Officials-in-Charge. Likewise, our employees have participated in development of the plan, and they understand that their work performance and evaluation are linked to its implementation. This plan will be revised as required by the course of events and change. We will welcome your continuing assessment and comments as we strive to improve our services.





Office of Management Systems and Facilities Implementation Plan

Part I

1. Purpose

The purpose of this implementation plan is to convey our organizational identity within the NASA Strategic Management System framework and to chart the new directions we follow to align with this framework. This document explains who we are, where we are going, and how we intend to get there. It also communicates our functional leadership role to our employees, customers, and stakeholders and how we intend to meet their requirements.

2. Who We Are

The Office of Management Systems and Facilities (OMS&F) provides the corporate leadership, representation, and oversight in various functional areas necessary for the Agency to optimally carry out its mission. Our contribution helps ensure that NASA's work in science and technology yields the greatest value for the American people. Within our functional areas, our responsibilities include:

Aircraft Internal Agency Directives

Contractor Labor Relations Internal Management Control Systems

Energy Logistics Environment Security

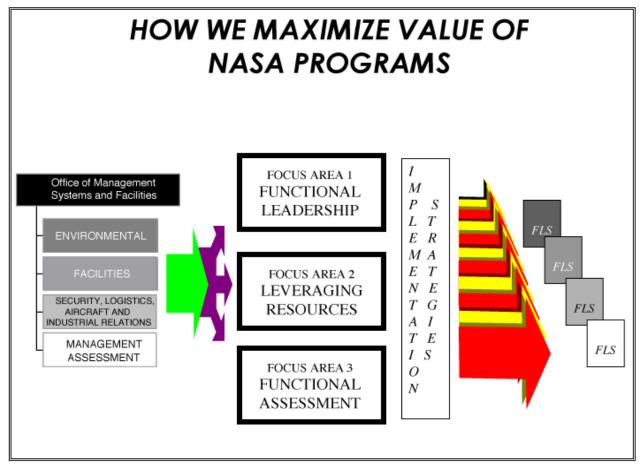
Facilities and Real Property

We serve in an advisory capacity to the Administrator and work in partnership with the Enterprises, Associate Administrators, and Center Directors to ensure that Agency activities are conducted in accordance with all statutory and regulatory requirements. We also advise the Administrator and senior managers of potential efficiencies to be gained through Agencywide standardization and consolidation.

Our Values

All OMS&F efforts are designed to support the successful accomplishment of NASA's missions and its Strategic Plan. Our relationships with our customers are characterized by professionalism, integrity, responsiveness, technical accuracy, and a quest for excellence. We value and reflect a culturally diverse workforce. We are committed to teamwork both internally and with our external customers. We continuously improve our processes and services. We seek to understand our customers' requirements, and to deliver the right product and service the first time, on time and within budget.

We realize that the most powerful force enabling our success is a committed workforce. Inspired employees are more likely to serve customers well, stay healthy, and contribute ideas and energy to improve group performance. We also stress the value of an effective workplace. Good workplace design is an essential ingredient in promoting innovation, improving communication, and, in turn, boosting productivity. To this end, we strive to create the "model organization." Our comprehensive strategy to achieve this state includes integrating human resources, business processes, and technology. By implementing these elements as a whole, our model organization of a highly motivated and productive workforce can be achieved.





3. Where We Are Going

The Office of Management Systems and Facilities exists to support NASA's vision and mission to further America's aerospace programs. We have established three focus areas:

- Functional Leadership
- Leveraging Resources
- Functional Assessment

The following are our goals for the three focus areas.

Focus Area No. 1: Functional Leadership

Provide Agencywide functional leadership that ensures NASA's mission success while optimizing effectiveness and efficiency. Ensure appropriate balance between NASA's mission needs and functional performance.

Goals

In collaboration with our customers:

- Implement an Asset Management System that enables and supports full-cost principles by the year 2001.
- Facilitate implementation of Performance Based Contracting in all functional areas by the year 2001.
- Identify and lead implementation strategies such as:
 - Lead Centers, partnerships, and virtual and parallel teams.
 - Consolidation and standardization.
 - Sharing of best practices.
 - Use of business case analyses.

Focus Area No. 2: Leveraging Resources

Identify and integrate new techniques and technologies for the best use of past and future investments that dramatically increase the return on investment of scarce resources. Employ Crosscutting Processes that ensure decisions result in the optimal use of constrained resources. Improve the knowledge and skills of our workforce to facilitate the achievement of breakthrough results in our functional management areas.

Goals

In collaboration with our customers:

- Achieve a 5-percent increase in 1998 and again in 1999 in physical resource costs avoided through alternative investment strategies from the previous year. Cost avoidance is defined as an action taken today that avoids a potential greater future cost.
- Reduce physical asset holdings, both real and personal property, by 25 percent by the year 2007 from the 1997 baseline.
- Achieve a 50-percent reduction of toxic chemical releases and transfers by the year 2000 from the 1994 calendar year baseline.
- Enhance NASA's ability to acquire, maintain, and dispose of facilities and achieve a greater than 90-percent scheduled availability.

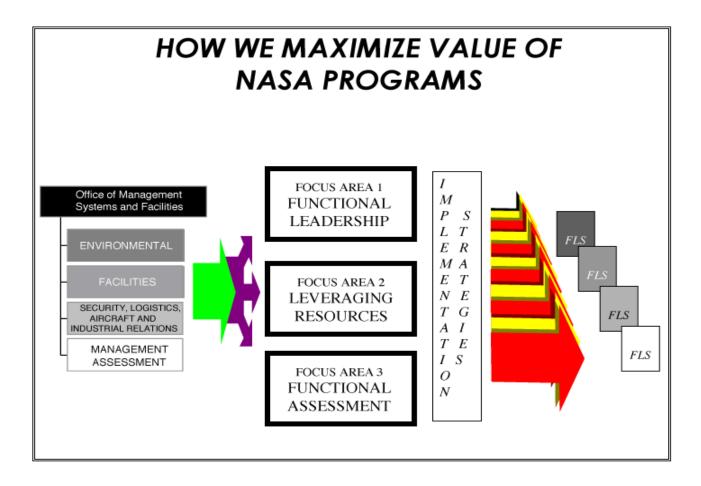
Focus Area No. 3: Functional Assessment

Enable informed senior management decisionmaking by providing Agencywide functional assessment, stewardship, risk assessment, and insight into cross-functional performance.

Goals

In collaboration with our customers:

- Provide integrated program assessments to senior management and develop functional leadership initiatives to address those problems identified.
- Close all NASA Inspector General and General Accounting Office recommendations within 6 months.
- Align all OMS&F policies with the NASA Strategic Management System.
- Align physical asset support with our customers' requirements by achieving a satisfaction survey score of 4.5 or greater, on a scale of 5, by the year 2005.





4. How We Get There

The Office of Management Systems and Facilities (OMS&F) has been aggressively implementing a major paradigm shift from top-down direction and indepth oversight to the functional leadership role delineated in the NASA Strategic Management Handbook. OMS&F has undertaken a number of functional leadership, leveraging, and management assessment activities while streamlining our processes. These activities are in line with changing the functional management paradigm.

Through our functional leadership strategies and follow-on management initiatives, OMS&F has identified and begun to facilitate the implementation of multiple strategies to leverage scarce resources. We have established virtual and parallel teams and networks to move principles into practice. Teams and networks consist of Center and Headquarters personnel, and they focus on determining optimal solutions through synergies arising from collaboration and consensus-building instead of from top-down direction. At the highest level, this includes participation in NASA councils and boards, which serve as senior-level advisory bodies to the Administrator. Under these councils and boards, many other parallel organizations and networks have been established to focus on breakthrough and continuous improvements in OMS&F functional areas. In addition, virtual teams have been commissioned to solve specific problems. When the task is done, the team goes away. Their efforts have resulted in across-the-board improvements in Agencywide functional processes and have enabled NASA to leverage Agencywide efforts without creating any new organizations. In addition, through Memoranda of Agreement, Lead Centers for functional excellence have been established to help us "rightsize" our organization and better leverage improvement opportunities across NASA. These Lead Centers have assumed Agencywide operational activities for designated functional areas.

Major alliances and partnerships have been created throughout NASA. As a result of the reduced budget, there has been a need to leverage resources through the development of memoranda of agreement for major alliances and partnering with other agencies. OMS&F has created study and analysis teams within "go-to" staffing constraints to support these efforts. This was done to manage the increased planning workload as well as to accommodate the increased program requirements workload from the Strategic Enterprises, which have eliminated many of their functional support positions.

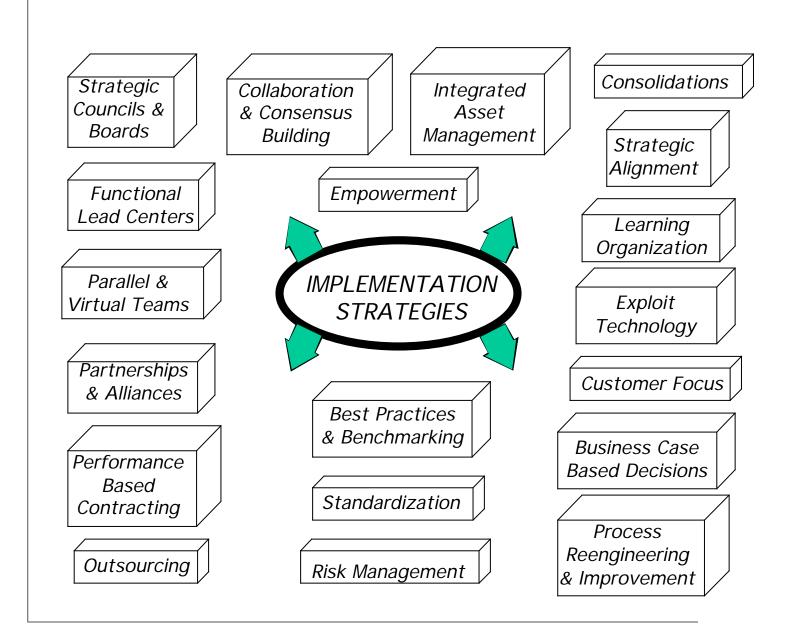
OMS&F is becoming a highly focused organization dedicated to implementing industry best practices uncovered through benchmarking with the best organizations in both the public and private sectors and other means. If we do not need to create it, we will not. If industry can do it better, we outsource it. And if we outsource it, we ensure that NASA obtains best value through the use of Performance Based Contracting principles. In all cases, we use business case-based decisionmaking principles to the maximum extent practical. We standardize and consolidate functions and processes where it makes sense, utilizing accepted risk management principles as our guide. We exploit technological innovations where they lead to better products and services at less cost to NASA. We continue to reengineer our processes to provide our customers with the best possible products and services through an Integrated Asset Management approach, which supports full-cost management principles. We continuously seek out and implement any and all changes in our functional areas, which will provide NASA with better, safer, more reliable products and services at reduced costs. We accomplish our goals and objectives through empowering our workforce and building an organization that is continuously learning what to provide and how better to provide it as we help ensure NASA mission success.

The changes we have made and continue to make to our Agencywide functional processes are aimed at ensuring that our customers who are performing critical research, development, testing, and

aerospace operations can obtain the required levels of support at the absolute minimum cost. Future plans include further leveraging of improvements by expanding the number and functionality of our parallel networks to ensure that we eliminate redundant efforts and minimize costs; expanding further Center involvement in Agencywide functions as lead and virtual Lead Centers for functional excellence and improvement; revisiting benchmarking activities to ensure that NASA is "best in class" in functional efforts; and further examining all leadership efforts in conjunction with NASA mission readiness and adjusting priorities to ensure full alignment with NASA's vision and mission.

Implementation Strategies

The following graphics depict how we maximize the value of NASA programs through our implementation strategies. Several examples are included in the subsequent graphics of how we are implementing the paradigm shift to achieve the overarching goals within our three focus areas.



Strategic Councils and Boards

Senior Management Council Capital Investment Council

Program Management Council

Chief Information Officer Council

Integrated Financial Management Council

Full Cost Steering Council

Environmental Management Board

Oversight Review Board

Interagency Aircraft Operations Panel

Management Controls Steering Committee

Facilities Review Board

Functional Lead Centers

NASA Operational Environmental Team NASA Environmental Tracking System

Security/Law enforcement standards and curriculum Logistics business systems

Specifications Kept-Intact

Parallel and Virtual Teams

Integrated Asset Management Process Team

Facility Directors

Corporate Maintenance Leadership Team

Energy Managers

Innovative Remedial Technologies Team

Intellink-S Development Team

Interagency Aircraft Operations Panel

Labor Relations Officers

NASA Audit Liaison Representatives

NASA Directives Managers

Partnerships and Alliances

Air Force Center for Environmental Excellence Department of Energy

Defense Advanced Research Projects Agency

Air Force Materiel Command

Construction Industry Institute Federal Facilities Council

Energy Savings Performance Contract

Performance Based Contracting Facilities operations and maintenance

Outsourcing

"Just-in-Time" purchasing systems GSA fleet vehicles

Collaboration and Consensus-Building

VITS and electronic communications with virtual teams Functional conferences/working group meetings

Communications security support to Enterprises Program logistics support to Enterprises

Empowerment

Cross-matrixed team structure

Process and directives reengineering

Construction of Facilities block funding to Centers

Best Practices and Benchmarking

Partnering with customers and stakeholders

Integrated logistics support planning Excess computer donation program Centralized security clearance adjudication

Reliability-centered maintenance
Construction preproject planning, value engineering

Standardization

Integrated asset management

Estimating model for environmental cleanup

Directives management

Facility utilization and real property information on Interne

Risk Management

Six-Step environmental compliance and restoration prioritization

Security threat countermeasure plans

Computerized Maintenance Management System

Integrated Asset Management

NASA Environmental Tracking System

Legacy systems

Major Facilities Inventory

Consolidations

Automation of the environmental reports

Agencywide Travel Services Contract

NASA Online Directives Information System Corrective Action Tracking System

Offsite lease reductions

Strategic Alignment

Realignment of functional management policy into the Strategic Management Handbook

Implementation Plan

Functional Leadership Strategies

Facilities' Blue Print

Environmental Annual Operating Plan

Learning Organization

Business case development training

Customer survey training

Activity-based costing training

Outcome metrics

Use of continual improvement process

Cross-training staff to eliminate single points of failure

Logistics instruction at Advanced Project Management course

Facilities research participation

Applying lessons learned from NASA Online Directives Information System development and migration

Exploit Technology

Commercial off-the-shelf software usage

Anti-theft devices for Information Technology hardware Automated access and perimeter controls

Facilities maintenance predictive testing, inspection, and other diagnostics

Customer Focus

Customer surveys

"Next-day desktop" delivery Dedicated security support to selected Enterprises Excess computer donation program

Business Case- Based Decisions

Asset management

ISO 14000

Plum Brook reactor decommissioning

Travel Services contract

Directives management end-to-end process

Construction of Facilities economic analysis

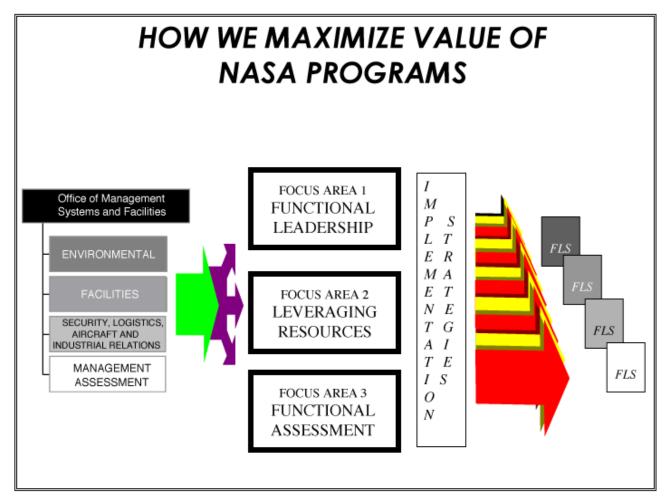
Process Reengineering and Improvement

Asset management

Integrating external reporting to meet Government Performance and Results Act

National Environmental Policy Act process

Contract Property Management Improvement Plan Threat analysis and dissemination



FUNCTIONAL LEADERSHIP STRATEGIES

The following summary-level Functional Leadership Strategies convey our tactical plan in setting strategic direction and evaluating the performance of our functions. They are an integral part of NASA's Crosscutting Processes: Manage Strategically, Provide Aerospace Products and Capabilities, Generate Knowledge, and Communicate Knowledge. The following summary-level Functional Leadership Strategies provide greater detail of the goals, objectives, and metrics used to measure our success. Achievement of the goals and objectives within these Functional Leadership Strategies leads to more effective and efficient operations of the Agency.

Part II

Functional Leadership Strategies

Aircraft Management

To achieve the challenging goals of NASA's aerospace program, a robust aviation support infrastructure must be efficiently maintained. The Aircraft Management Team (AMT) at NASA Headquarters is the corporate focal point for Agencywide aircraft operations management, including aircraft maintenance, quality assurance, and operational safety. This corporate-level team, in close collaboration with interagency and intercenter aircraft operation teams, develops and issues Agencywide aircraft operations management policies and procedures, provides oversight of mission management aircraft and associated training, coordinates aircraft acquisitions and dispositions, and manages a mission management aircraft and an aviation safety officer program. The AMT creatively utilizes the operational and managerial talents inherent in the Intercenter Aircraft Operations Panel (IAOP) to increase the utilization, safety, and productivity of NASA aircraft operations. The AMT supports NASA Center aircraft operations organizations, program office research, science, and applications, and space flight programs and projects, all of which require the use of NASA's aviation resources.

The missions of the AMT are to ensure that required aircraft resources are available to meet the needs of Enterprise customers, to ensure that NASA's aircraft are operated in a safe manner, to provide for the lowest cost life-cycle management of the Agency's aircraft resources, and to favorably influence external aircraft related policymaking organizations consistent with NASA's programs and operations. AMT goals and objectives are to:

- Continue to search for opportunities to increase safety and efficiency by modernizing aircraft and related equipment.
- Establish and implement Agencywide operational safety performance standards.
- Establish a process and mechanism to create efficiencies in aircraft management across all Enterprises and to support the Capital Investment Council (CIC).
- Identify and migrate to NASA Centers appropriate aircraft management activities.
- Effectively utilize the Intercenter Aircraft Operations Panel to increase the efficiency and effectiveness of NASA's aircraft operations management activity.
- Develop and deploy an automated aircraft management information system.

The AMT will measure its success against the metrics indicated below, in addition to metrics that indicate Agencywide aircraft capabilities, availability, and safety performance. Site reviews at each NASA Center will be conducted by members of the IAOP to ensure compliance with safety, maintenance, quality, and operational requirements.

Metrics

- Establish an Aircraft Management Board by August 1998.
- Create a comprehensive, integrated plan for modernizing mission management aircraft by December 1998.
- Implement the mission management aircraft modernization plan by September 1999.

Aircraft Management Strategic Roadmap

Present State -

Functional Mission Core Activities 1998-2000 2000-2005 Integrate aircraft operations and Agency project/programs Establish Agencywide Institute integrated contracts for training, maintenance, and operational performance standards Maintain efficiency of training Coordinate Intercenter Aircraft Operations Panel (IAOP) Reviews **Aviation Safety** contracts

Improve IAOP review process
Implement ISO 9000 procedures Maintain aircraft accidents at zero Provide high-quality training Set qualification and certification standards Make aviation personnel available and properly qualified and certified Establish Aircraft Management Board Institute streamlined procedures for administrative Leverage personnel assets among and research aircraft replacement Centers and migrate activities Modernize aircraft fleet **Aviation Resources** Make aircraft and facilities available Coordinate acquisition, utilization and disposal of research aircraft Institute NASA Aircraft
Management Information System Formulate Agency directives in partnership with Centers Establish Aircraft Management Implement streamlined GSA Federal Aviation Management **Aircraft Operations** Formulate Agencywide policy Information System
Implement improved aircraft Board Provide coordination for Agency Policy and formulation cost accounting procedures Increase utilization of IAOP in Management aviation operations Integrate Enterprise aircraft Improve Agency reporting Agencywide aircraft management operations policies and resources

· Future State

Contractor Industrial Relations

The Contractor Industrial Relations function will help carry out the White House mandate as stated by Vice President Gore in February 1997: "This White House will take action to give the right to organize new teeth. We are going to send a message. . . . If you want to do business with the Federal Government, you had better maintain a safe workplace and respect civil, human and union rights." The Contractor Industrial Relations function's prime mission is to enhance onsite contractor workforce stability. It is charged with carrying out private-sector labor-management matters on behalf of the Federal Government. Our strength is in rapid constructive response to unforeseeable external issues—for example, legislative changes, case law adjudications, work stoppages, congressional inquiries, and so forth.

The Contractor Industrial Relations function implements the Office of Management Systems and Facilities' principles of operations, in that we will deal with the Strategic Enterprises and all other customers with a high degree of professionalism, integrity, and technical accuracy. We believe teamwork (both internally and with our customers) is a prerequisite for understanding our customers' requirements, enabling us to deliver the right product or service the first time and providing them with responsive and innovative solutions to new situations. To support our customers, we will maintain current data and continuing knowledge of those internal/external factors affecting NASA industrial relations functions, such as congressional legislation, case law adjudications, union-management negotiation trends, and procurement actions, and we will take necessary actions to reduce the impact on Agency costs and schedules.

We will provide functional leadership and policy development, Agencywide, for NASA's contractor labor relations activities. This includes prompt and effective advice and counseling to NASA Field Installations on issues, disputes, and strike actions resulting from contractor-union labor law relationships, interpretations, and applications. We will provide guidance and recommendations concerning Service Contract Act and other labor statutes, including the handling of statute violations. We will continue to work closely with the Office of General Counsel, the Office of Procurement, and the Strategic Enterprises to assure full compliance regarding onsite labor relations, statutory matters, and the Agency procurement process. Also, to help advance the Administration's direction cited above, we will plan and conduct visits with key international labor leaders.

The Contractor Industrial Relations function will utilize key process measures, such as tracking the number of union collective bargaining agreements negotiated each month (versus the number due), the number and timeliness of requests for statutorily required wage determinations processed for Headquarters and the Centers, the number of work stoppages or other forms of labor unrest, and the number of congressional or other similar outside inquiries processed.

*Roadmap not applicable.

Environmental Management

Environmental Management is a way of life that is an integral part of the NASA culture. While the Agency's science and research missions are primary, they should not be pursued at the expense of the environment. The impact of Agency operations on the global environment must be able to withstand the scrutiny of the international community. In like manner, NASA operational impacts on the local environment are examined and mitigated in partnership with our local communities. Whether it is designing and fabricating robotic spacecraft, launching the Space Shuttle, or conducting basic research, we must seek solutions that are environmentally benign. NASA must continue to identify program and process revisions to reduce adverse environmental impacts.

NASA's environmental strategy demonstrates our commitment to protecting the environment and provides a framework for meeting today's environmental needs and preparing for future challenges. It does not limit flexibility to meet environmental challenges; rather, it provides a philosophical context by which all efforts can be guided. The strategy provides for a unity of purpose and direction and fosters an environmental ethic of leadership and national resource stewardship in everyone associated with NASA. The *Environmental Excellence for the Twenty-First Century* strategy consists of four focus areas:

- Prevention—fostering a holistic approach to pollution prevention to instill an environmental
 ethic that will avoid future compliance and restoration problems. This requires strengthening
 of the National Environmental Policy Act (NEPA) planning process, modifying industrial
 processes, and developing substitute materials. Because there may be slightly higher initial
 costs, final decisions will be based on project life-cycle costs, while seeking the most
 environmentally benign solutions.
- Compliance—ensuring that NASA's current and future operations meet all Federal, State, and local environmental regulations. Total compliance requires us to be proactive in monitoring changing requirements and in striving to reach compliance status in advance of the regulatory date to further demonstrate our commitment to the environment.
- Restoration—addressing all contaminated sites as rapidly as possible to protect human health and the environment. Resource and technology limitations require this effort to be carried out in prioritized sequence. The priority system must clearly communicate project requirements and limitations to support appropriate funding decisions. The Agency will actively seek public involvement in the decisionmaking process.
- Conservation—exercising responsible stewardship for all the resources NASA controls. This
 extends to careful land-use planning, the enhancement of existing natural resources, and
 the preservation of those cultural resources associated with significant aspects of our
 historic and prehistoric heritage. Conservation, especially through programs such as
 recycling, energy, and water conservation, reduces the impact of our activities on the
 environment.

The immediate priority is to bring all NASA activities into compliance with current environmental requirements, while simultaneously restoring previously contaminated sites as quickly as funds allow. Conservation and pollution prevention shall be considered in all new projects and programs to minimize environmental impacts and preserve our natural and cultural resources for future generations.

Woven throughout the strategy are the crosscutting issues of awareness, community outreach, and resource advocacy. In implementing this strategy, NASA will actively seek partnership arrangements with Federal and State agencies, academic institutions, industry, and other nations to leverage our efforts and share our knowledge to the benefit of all humankind.

Metrics

- **Prevention**—Environmental Cost Avoidance: In 1998 and 1999, achieve a 5-percent increase in costs avoided, through alternative investment strategies in energy, pollution prevention, compliance, and/or recycling, from the previous year.
- **Compliance**—Toxic Chemical Reduction Progress: Achieve an Agency 50-percent reduction of toxic chemical releases and transfers by the year 2000 from the 1994 calendar year baseline.
- **Restoration**—Environmental Restoration: Have 96 percent of all NASA hazardous waste sites closed, cleaned up, under assessment, or in the remediation process by September 30, 1998.
- **Conservation**—Energy Reduction Progress in Nonmission Variable Buildings: Achieve a 30-percent reduction from the 1985 baseline in energy usage per square foot of building by the year 2005.

Environmental Management Strategic Roadmap

Present State -Future State Functional Mission Core Activities 1998-2000 2000-2005 Implement life-cycle costing
 Promote internal and external Incorporate pollution prevention considerations in all Agency decisions Prevention partnering Enhance an internal awareness Implement an environmental management system for decision support Implement an integrated program
Eliminate/reduce hazardous Develop visibility for implementing pollution approach to minimize Transfer new technology to environmental material usage and subsequent prevention industry contamination and pollution wastes Pursue new technology using environmentally benign materials/products Bring all current operations into Identify noncompliance areas and develop performance measures to compliance compliance
Enhance management visibility
Develop and implement
compliance monitoring program
Provide policy and guidance
Identify and advocate adequate
funding and personnel Compliance track progress Establish a risk-based prioritizatio Develop an information system to identify liabilities and costs Ensure that all operations process to ensure correction of compliance issues meet and maintain compliance with environmental laws Conduct in-house compliance and regulations assessments Advocate adequately trained and disciplined personnel Monitor pending regulations Partner with regulators Establish NASA contractor performance measures Identify and prioritize all sites across the Agency Allocate resources based on Clean up contaminated sites as rapidly as funding permits Use innovative technology and Restoration processes to remove contamination efficiently and Establish and maintain a positive reputation with the regulators risk analysis
Identify, justify, and defend
resource requirements
Negotiate agreements to allow
cleanup actions to proceed Cleanup contaminated sites effectively Involve local communities in the and the public Partner with regulators to find restoration process, decisions, and activities acceptable solutions Purchase products made from recycled materials Identify and advocate recycling opportunities Encourage the development of recycling and similar technologies that benefit the environment Consider resource implications in land-use planning decisions Establish partnerships to improve natural and cultural resources Conservation Assess and protect natural and cultural resources Enhance recycling, energy, and Protect and enhance water conservation programs natural and management Reduce energy/water usage to meet Federal goals cultural resources Obtain resources baseline data Establish innovative funding strategy

Facilities Engineering

The Facilities Engineering Division provides leadership and insight toward the goal of having reliable facilities available at minimum cost for NASA programs. The Division pursues opportunities for optimal plant performance by maintaining a global perspective and fostering continual and breakthrough improvements. In the search for new ways to leverage knowledge and stretch buying power, the Division participates with and supports external associations, such as the Construction Industry Institute, the Society for Machinery Failure Prevention Technology, and the Federal Facilities Council. Aligned with the Business Roundtable strategy regarding the built environment, the Division vigorously develops and promotes the teaching of capital advantage and leveraging activities that dramatically improve the efficiency, effectiveness, and rate of return on capital asset acquisition, maintenance, and reliability improvement. In addition, the Division provides advice, analyses, and integrated data on facilities use, condition, value, investment requirements, and the use of advanced technologies. The Division strategy has four thrusts:

- Planning and Real Property—providing a wide-ranging perspective of current and planned
 physical resources; fostering cooperation and alliances with other agencies and organizations to
 increase reliance on national facility capability and to eliminate unnecessary
 redundancies; exploring and advancing utility privatization; and maintaining
 NASA's automated real property and facilities utilization data bases.
- **Design and Construction**—leading the planning, design, and construction of essential facility projects; stretching the buying power of related resources and assessing whether they are applied efficiently and effectively; and developing best practices for maximum return on investments at lowest life-cycle costs.
- Maintenance—assisting Centers in ensuring required facilities reliability and availability at the
 minimum cost; developing standardized "tools" and improvement practices that incorporate
 advanced maintenance methods and technologies; and monitoring the condition and performance
 of the NASA plant.
- Resources—providing leadership and support for resources and analyses for financial management, budget development, and funds expenditures in all facilities areas. This includes interfacing with external stakeholders, such as Congress and the Office of Management and Budget.

Metrics

- Construction Efficiency—percentage of projects completed on schedule and within budget.
- Facility Revitalization Rate—the frequency that the active facilities base is renewed.
- Facility Reliability—planned work as a percentage of total maintenance work.
- Backlog of Maintenance and Repair—the deferred, unfunded cost of identified repairs.
- Cost of Facilities—the cost to acquire, maintain, and dispose of facilities and real property.

Facilities Engineering Strategic Roadmap

Present State -Future State **Functional Mission** Core Activities 1998-2000 2000-2005 Planning/Real Property Perform integrated master Develop Agencywide crosscutting facility programming based on Exploit World Wide Web as Provide a global Agency planning and utilization studies synthesized Enterprise impacts Integrate Real Property, Utilization, and National Facility Inventory perspective of constructed physical resources to enable vehicle for Agency Real Property Better leverage Agency properties by understanding all information potential use opportunities Perform horizontal requirements and enhance support of NASA Develop contractor-held real data bases into one interactive, Strategic Enterprises and analyses and assessments property reporting system high-performance system Centers Assure facility requirements are Implement breakthrough Achieve cost avoidances by delivered on time and within strategies identified by industry research to minimize delivery time Achieve 90-percent Construction of Facilities obligations **Design and Construction** imbedding best practices for budgets Interface with national industry preproject planning, value Lead NASA in the planning, engineering, constructibility review, and partnering groups to identify and imbed best advocacy, design, construction, practices that yield quicker Improve renewal rate to < 75 and delivery of mission essential Achieve 85-percent Construction delivery at minimal cost years Foster Center use of innovative of Facilities obligations Improve renewal rate to < 100 facility projects Participate with industry in search of breakthrough strategies that strategies and NASA reputation maximize the return on capital as "customer of choice" investment Dramatically reduce facility failures by imbedding:
- Reliability-Centered Maintenance Achieve > 90-percent scheduled availability while minimizing maintenance costs through: Identify and imbed industry best Maintenance practices and cutting-edge technologies to dramatically Performance Based Contracting
Predictive Testing Developments
Diagnostics and Prognostics - Al and Expert Systems - Automatic Self-diagnostics - Building/Systems Automation Ensure required facilities improve reliability and reduce reliability and availability to meet NASA Strategic Enterprise Lead Agencywide maintenance Technology Lead the development of outcome - Advanced Materials Technology mission goals and objectives at continuous improvement initiatives metrics, which measure mission Full integration of Proactive the minimum cost Maintenance Processes activity vs. maintenance costs Analyze Agency requirements for Fully integrate financial Analyze Agency requirements for facilities resources management of facilities resources facilities resources in a full-cost Resources Guide use of resources to achieve into the Agency's overall financial environment Enterprise goals Lead financial management to management processes utilizing Implement further improvements Provide leadership support for in financial management processes to take advantage of assure proper use of resources Retain credibility with OMB and financial management and Analyze use of facilities resources budget development in all against Agency metrics technological advances in Congress through accurate, timely facilities areas automation and information facility resource information systems

Logistics Management

The role of NASA's Logistics Management function is to provide policy, oversight, technical guidance, and advocacy to NASA customers, Enterprises, employees, and contractors. In this capacity, the Logistics Management Team provides corporate expertise, credibility and knowledge to assist both internal and external customers in the areas of:

- Supply & Equipment Management
- Contract Property Management
- Transportation/Travel Management
- Program Logistics Management

The Supply & Equipment Management area is responsible for NASA physical assets valued at more that \$20 billion. This is personal property (as opposed to real property), categorized as installation-held materials and equipment and contractor-held property. The type of asset management process employed for these categories of property depends on the conditions of use. NASA-owned physical assets used by NASA employees and onsite support contractors are generally managed in accordance with NASA Policy Directives and NASA Procedural Guidance documents. NASA-owned assets used by commercial entities and universities in their own facilities (to perform work for NASA under contracts) are governed by the NASA FAR Supplement as well as the provisions of their respective contracts.

The Logistics Management goals through the year 2000 revolve around reinvention and reengineering of the asset management process. A primary element of this effort is the development of standard requirements for asset accountability that can be easily integrated into an Agencywide financial management system. The development of standard procedural guidance through Center-level teams will contribute greatly to the successful implementation of these goals. The reduction of Government ownership of assets used in the performance of contracts and Center support activities and increased outsourcing of activities, such as the disposal and stocking of materials, will lower overhead costs associated with warehouse space, labor, and systems management. This will result in a more effective management of NASA-unique assets. In addition, a reduction in property loss rates will be pursued.

A portion of the Logistics Management function is devoted to ensuring the availability of economical, efficient, high-quality transportation and travel services that encompass new and innovative strategies utilizing advanced technology. Program gains through the year 2000 and into the next century will stem from the implementation in September 1997 of the first, long-term, Agencywide travel services contract. Driven by our desire to withdraw from operational functions, plus the rising operations and maintenance costs and an Executive Order mandating the acquisition of expensive (but environmentally friendly) Alternative Fueled Vehicles, we are actively moving to the optimal use of the GSA Interagency Fleet Management System. Other transportation management strategies are planned to reduce operational and infrastructure costs—for example, creating a single automated data base accessible to all customers desiring to transport hardware. This data base will identify the location and size of containers to prevent each program/Center from developing new, costly containers.

During FY 1998, the Logistics Management Team is developing, in collaboration with the Enterprises and Center logisticians, a Logistics Management Network. This network will provide automated links to logistics personnel, materiel resources, planning and cost estimating applications, and data bases containing historical information and cost analogs for use in

estimating the costs of new initiatives. It will afford program and project planners easy access to a variety of tools and information on materiel handling and support equipment, transportation assets, maintenance facilities, and flight and ground parts that could support project development and operations. Beyond this, a Logistics functional/Lead Center arrangement or partnership will be explored.

Through performance measurement and operations-level self-assessments, supplemented by site visits and meetings, the Logistics Management Team provides technical guidance, oversight, and training on unique and emerging asset management, transportation/travel, and maintainability issues. Joint participation with our counterparts from other Federal agencies and industry develops opportunities for benchmarking and ensures a NASA voice in the development of Government-wide policy.

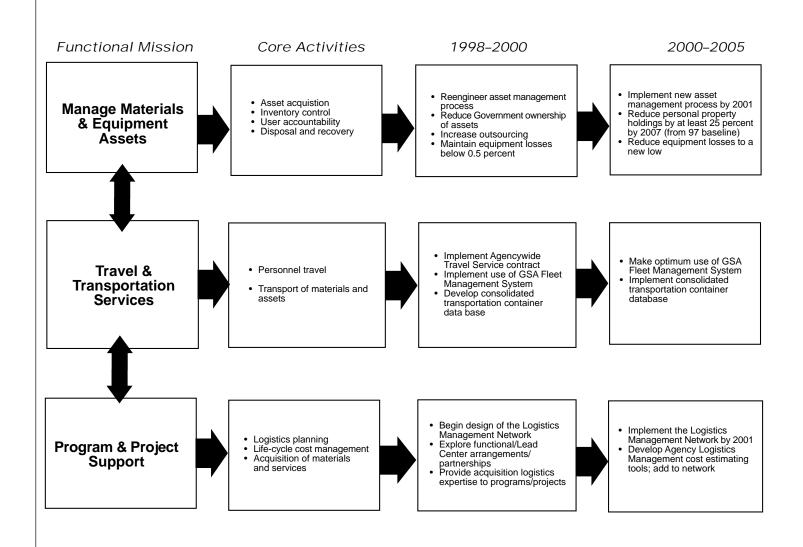
In support of NASA's Strategic Plan and in cooperation with the Strategic Enterprises, the Logistics Management Team is striving to implement new philosophies, technologies, and processes that reduce redundancy, oversight, and infrastructure while improving responsiveness to customers and the effectiveness of physical asset management. These activities are geared toward partnering between, and further cooperation and consolidation among, the NASA Centers.

Metrics

- Maintain equipment losses below 0.5 percent.
- Implement a new asset management process for 2001.
- Reduce personal property holdings by at least 25 percent by 2007 (from the 1997 baseline).
- Implement the Logistics Management Network Agencywide by 2001.

Logistics Management Strategic Roadmap

Present State — Future State



Management Assessment

Management Assessment is a key management component used to ensure that processes are in place so that NASA programs achieve their intended results; resources are used consistent with NASA's mission; programs and resources are protected from waste, fraud, abuse, and mismanagement; activities are in compliance with laws and regulations; reliable information is maintained, reported, and used for decisionmaking; and internal NASA directives are implemented and followed to guide the business processes of the Agency.

Through functional leadership in policy development, facilitation, oversight, integration, tracking, and reporting, we have evolved to an Agencywide virtual team. The virtual team provides a synergistic approach for evaluating and measuring the adequacy of management control systems; ensuring that timely corrective action is taken by Agency managers to strengthen management controls and implement agreed-to audit recommendations; providing effective support for the General Accounting Office (GAO) and Office of Inspector General (OIG) audit and inspection activity; interpreting, monitoring, tracking, and reporting on internal NASA directives; and integrating accountability, audit, and internal NASA directives activities with strategic planning and other management requirements.

NASA's management assessment processes enable the Agency to meet external requirements in an effective and efficient manner and to maintain public trust in NASA by facilitating internal understanding and compliance with applicable directions, policies, statutes, and regulations. Innovative automated systems, customer participation, and sharing of best practices are strategies necessary to balance functional performance with mission needs. Technology and communication are key components to leveraging limited resources and providing timely, accurate, and relevant information so that customers can make informed decisions.

Metrics

Management Assessment measures the ongoing efficiency and effectiveness of:

- Audit Followup Reporting:
 - OIG audit recommendations, with which NASA management concurs, are implemented within 6 months.
 - Management responses to draft OIG reports are completed within 30 days.
 - GAO-OIG audit data base is 90-percent accurate.
- Directives:
 - Current and available within 5 business days of final approval.
 - Process through the coordination and approval cycle within 60 days for NPC's/NPD's and within 90 days for NPG's.

Deviations from performance standards will be identified, categorized, and analyzed for trends, and action will be taken to improve policy, processes, systems, and/or communication, as appropriate.

Management Assessment Strategic Roadmap

Present State — Future State

Functional Mission Core Activities 1998-2000 2000-2005 Develop metrics to improve Have Agencywide virtual Fully integrate the management assessment process with the Government Performance and accuracy and timeliness of organization for directives, audits, directives, timeliness of management audit responses, and management control Integrated communication, training, and Results Act/Chief Financial Officer and corrective action reporting Facilitate informed management decisions through identification and Act accountability reporting Broaden assessment capabilities Integrate functional management requirements into Assessment to support Capital Investment Council, Senior Management the Strategic Management Facilitate the integrated correction of significant management Handbook Improve internal structure to concerns and dissemination of timely and accurate directives and audit assessment process Council, and other forums Optimize use of ISO 9000 mechanisms for evaluation of ensure continuity in a changing environment Incorporate ISO 9001 processes management controls for all ISO Strengthen teaming to prevent into management control certified processes single points of failure evaluations Increase trends analysis capability Refine the audit process to improve timeliness of Continuously monitor and improve the audit support process to ensure it meets the needs of management responses and completion of corrective action Provide guidance and support for Test the functionality of CATS II NASA management and the OIG and GAO audit process Provide the operational system to ensure accuracy and reliability; internal/external auditors enhance as appropriate Upgrade technology to improve the tracking and timeliness of audit **GAO/OIG Audit** (Corrective Action Tracking System Conduct customer surveys (CATS II)) and staff support to maintain and upgrade all audit identify best practices, and improve the audit process Facilitate the audit process Continuously improve audit support activities based on accordingly Use a variety of forums to create customer surveys and the identification of best practices an Agencywide virtual organization for audits and management control communication and training Develop and implement an Use a variety of forums to create Agencywide, integrated online directives management system to Provide the policy framework and staff expertise to effectively manage the Agency-level and sustain an Agencywide virtual team for directives management provide all Agency directives from Conduct customer surveys and one central, easy-to-use location; this system will incorporate a Directives Management System identify best practices to improve directives management activities Bring online a state-of-the-art directives library, a directives Provide the operational system (NASA Online Directive Information System—NODIS II) **Directives** management system for the "search engine" to enhance the system's usefulness to customers Management construction and coordination process, and the capacity to link and staff support to maintain Streamline the directive to all other pertinent information/ Facilitate the development process to reduce the time needed to construct and accurate and current directives regulatory sources Through linkages with NODIS, create a fully integrated management document library for directives process Link Headquarters ISO 9001 coordinate a directive Upgrade technology to improve the functionality of NODIS II software and hardware documentation to the Directives Library (NODIS)

Security Management

The employees, contractors, and visitors of the National Aeronautics and Space Administration, like people everywhere, deserve and require a safe place to work. The American public has a right to expect that NASA will take all proper precautions to ensure that the multibillion dollar assets entrusted to us are protected from loss, theft, or destruction. Unfortunately, our Earthbound civilization is not free from threats to our peaceful endeavors and goals.

"NASA's original charter mandates that the agency widely disseminate the results of its activities. Our philosophy is one of openness, of sharing the triumphs and setbacks of our cutting edge research. As a result, the public has shared these experiences and many feel a sense of direct ownership or involvement in NASA's programs. This is how it should be—NASA's programs are, indeed, their programs."

Dan Goldin 1997

The goals of NASA's security services are to provide safe and secure environments for everyone who works at or visits our Installations and to ensure that the assets and vital information of the Nation's aeronautics and space program are protected from harm. We seek to create a workplace free from violence and crime so that NASA personnel are free to carry out their enterprises to the best of their outstanding capability and potential. Our primary customers are all persons who work at or visit NASA Installations. Our secondary customers are the citizens of the United States, who trust NASA with the care and stewardship of the world's premiere aeronautics and space agency, and the national Administration, which we serve by intelligent and adequate implementation of national security regulations and policies.

The NASA security team consists of two parts: the operational elements at each NASA Installation, led by dedicated civil servants and their highly professional contract forces, and the civil servant corporate leaders at NASA Headquarters. At the corporate level, this group provides policy and oversight, representation, and influence to the national security community and the NASA Strategic Enterprises, as well as advice and assistance to the NASA Administrator.

In conjunction with the Strategic Enterprises and in alignment with NASA's Strategic Plan, NASA security is poised to accomplish its mission in light of the current threat environment and our pressing budget realities. We are developing and practicing, in harmony with national security initiatives, risk management principles and methodologies. We are implementing all new laws and regulations required of Federal agencies as a result of current security realities that have changed the face of the workplace in recent years, increased domestic terrorism, continuing foreign espionage, the new vulnerabilities created by our reliance on computer systems, and the increase in workplace violence. We are committed to openness in Government and the value of understanding history; we are striving to declassify as much information as possible in keeping with the needs of national security.

One of our most important strategic goals is to help NASA senior managers integrate security decisions early in the process, when risk management principles and security countermeasures can be most effectively and efficiently implemented. We urge people to consider security in the program or project design phase—from the location of our day-care centers to communications with our satellites, security is best and least expensive when it is built into the planning stages.

To communicate our strategy clearly to our customers, the NASA Strategic Enterprises, which fund our operations, and to measure our performance, we divide our mission into three broad pillars that, together, support our overall goal.

Protect PEOPLE Protect INFORMATION Protect PROPERTY

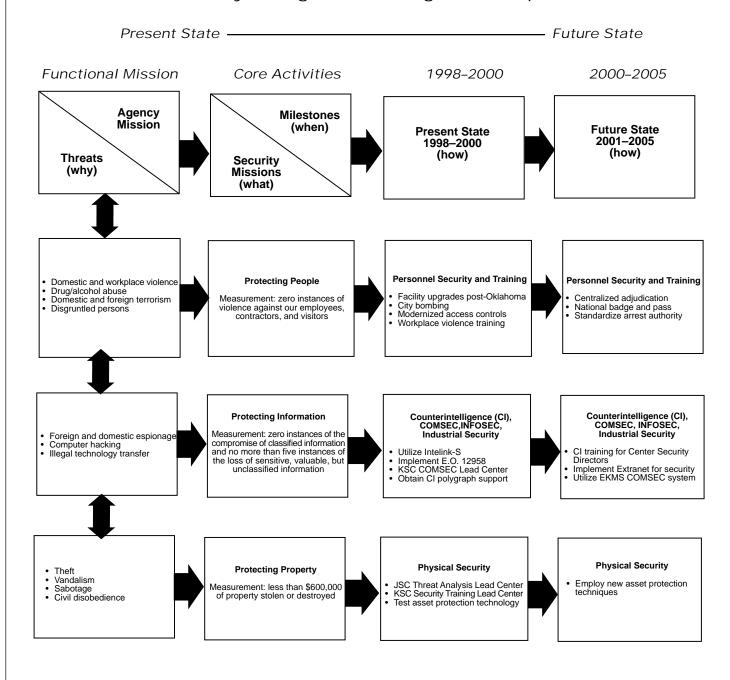
Training, customer awareness and satisfaction, increased management attention, effective threat analysis and dissemination, efficient enforcement, careful performance and cost measurement, strategic planning and policy development, effective external liaison and influence, and modern implementation—these are our most useful tools to foster and maintain these pillars.

Our Strategic Roadmap depicts the three pillars of security against threats and a prioritized timeline for various initiatives by security discipline. While none of these current initiatives seem likely to require Capital Investment Council deliberations, some will require close collaboration with various Enterprises and Institutional Program Offices.

Metrics

- Zero instances of criminal/workplace violence.
- Zero instances of the compromise of classified information.
- No more than five instances of the loss of sensitive, but unclassified information.
- Less than \$600,000 of property loss by theft or willful destruction.

Security Management Strategic Roadmap



THE OFFICE OF MANAGEMENT SYSTEMS AND FACILITIES TEAM

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Major Contributions to this Plan

The Code J Management Team acknowledges the contributions of the following working group members who supported the development of this plan:

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